

Patent Abstracts of Japan

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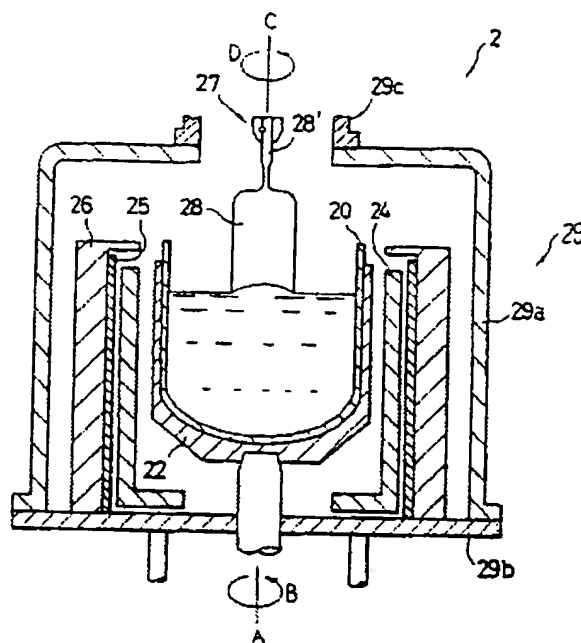
APPLICATION DATE : 07-07-88
APPLICATION NUMBER : 63167724

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TITLE : DEVICE FOR PULLING UP
SEMICONDUCTOR SINGLE CRYSTAL



ABSTRACT : PURPOSE: To obtain the title pulling up device capable of preventing a pulled-up single crystal semiconductor from being adversely affected by the impurities of a carbon member, etc., by forming a crucible with a quartz glass crucible and a crucible made of high-purity Mo or W and holding the quartz glass crucible, and making a heater from high-purity Mo or W.

CONSTITUTION: A quartz crucible 20 consisting of a high-purity split body and a high-purity Mo crucible 22 holding the crucible 20 are provided in a high-purity opaque quartz glass vessel 29 of the device 2 for pulling up a semiconductor single crystal. An Mo heater 24 coated with high-purity Mo is provided outside the crucible 22. A heat-insulating cylinder 26 consisting of an SiC porous body is furnished around the heater 24, and a reflector 25 with the surface coated with an SiO₂ film is provided inside the cylinder 26. An Si seed crystal 28' is rotated in direction of the arrow D, and pulled up in direction of the arrow C by a lifting means 27. By this method, an excellent Si single crystal 28 having a long lifetime and low OSE density can be obtained.

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